

Notice of Allowability

Application No.

09/961,147

Applicant(s)

FUJITA ET AL.

Examiner

Thanh T. Vu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 03/16/2007.
2. ☒ The allowed claim(s) is/are 1-7, 9-19 and 21-26.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material.

5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Kristine Kincaid
KRISTINE KINCAID
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mehdi Sheikerz on 05/21/2007.

The application has been amended as follows:

Please CANCEL claims 8, 20 and 27.

8. (CANCELED)

20. (CANCELED)

27. (CANCELED)

Please AMEND claims 1, 15, 25 and 26 according to the following:

1. (CURRENTLY AMENDED) An information processing apparatus for displaying an information object in a virtual space according to visual field data, where the information object represents one or more respective linked content items of different content types, and where said visual field data defines a visual field in said virtual space, said apparatus comprising:

holding means for holding, in an executable manner, a plurality of intermediate data

generating means specific to said respective linked content items of different content types of the information object for generating respective pieces of intermediate data specific to a content type

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of a particular linked content item of the information object, said generated piece of intermediate data comprising at least either of texture data or display form defining data, and for holding, in an executable manner, a plurality of different display image generating means specific to said respective linked content items of different content types of the information object for generating respective display images from said respective generated pieces of intermediate data;

means for assigning a display priority to each linked content item of the information object and changing the display priority of the particular linked content item of an information object based upon a geometric relation of the particular linked content item to said visual field in the virtual space, wherein the geometric relation of the particular linked content item to the visual field in the virtual space is a relative relation comprising one or more of position, orientation, or scale ratio of the particular linked content item to the visual field in the virtual space;

first means for causing said plurality of intermediate data generating means to generate at the respective pieces of intermediate data for displaying the particular linked content item of the information object displayed in the virtual space, according to the geometric relation of the particular linked content item to said visual field in the virtual space by comparing said changing display priority of the particular linked content item of the information object with a predetermined threshold for determining whether to generate a piece of intermediate data of the particular linked content item of the information object;

a memory for storing the generated pieces of intermediate data for rendering a display image; and

second means for causing said plurality of different display image generating means to

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generate display images of said particular linked content item of the information object from said respective generated pieces of intermediate data, to render the display image on a display memory region, according to the geometric relation between said visual field and said particular linked content item of the information object by comparing said changing display priority of said particular linked content item of the information object with a predetermined threshold for determining whether to generate the display image of said particular linked content item of the information object.

15. (CURRENTLY AMENDED) A computer readable data storage storing at least one program for controlling a computing apparatus for displaying an information object in a virtual space according to visual field data, where the information object represents one or more respective linked content items of different content types, and where said visual field data defines a visual field in said virtual space, according to ~~a process~~operations comprising:

storing, in an executable manner, a plurality of programs specific to said respective linked content items of different content types of the information object, each information object linked content item type specific program generating intermediate data specific to a content type of a linked content item of a particular information object, wherein said generated intermediate data comprises at least either of texture data or display form defining data, and each said program generating a display image specific to said linked content item type of the particular information object from said generated intermediate data;

assigning a display priority to each linked content items of the information object and changing the display priority of the particular linked content item of an information object based upon a geometric relation of the particular linked content item to said visual field in the virtual

space, wherein the geometric relation of the particular linked content item to the visual field in the virtual space is a relative relation comprising one or more of position, orientation, or scale ratio of the particular linked content item to the visual field in the virtual space;

causing the intermediate data to be generated for displaying said particular linked content item of the information object, according to ~~at~~the geometric relation of said linked content item to said visual field in the virtual space by comparing said changing display priority of the particular linked content item of the information object with a predetermined threshold for determining whether to generate a piece of intermediate data of the particular linked content item of the information object;

~~a memory for storing, in a memory,~~ the generated intermediate data for rendering a display image; and

causing said particular linked content item of the information object to be displayed from said generated intermediate data, according to the geometric relation between said visual field and said linked content item of the information object, to render the display image on a display memory region by comparing said changing display priority of said particular linked content item of the information object with a predetermined threshold for determining whether to generate the display image of said particular linked content item of the information object.

25. (CURRENTLY AMENDED) A method of displaying, in a computing apparatus, an information object in a virtual space according to visual field data, where the information object represents one or more respective linked content items of different content types, and where said visual field data defines a visual field in said virtual space, said method comprising:

processing data, specific to said respective linked content items of different content

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types, of the information object, by generating a piece of intermediate data specific to a content type of a particular linked content item of the information object, wherein said generated piece of intermediate data comprises at least either of texture data or display form defining data, and by generating a display image specific to said particular linked content item of the information object from said generated intermediate data;

assigning a display priority to each linked content items of the information object and changing the display priority of the particular linked content item of an information object based upon a geometric relation of the particular linked content item to said visual field in the virtual space, wherein the geometric relation of the particular linked content item to the visual field in the virtual space is a relative relation comprising one or more of position, orientation, or scale ratio of the particular linked content item to the visual field in the virtual space;

causing the piece of intermediate data to be generated for displaying said particular linked content item of the information object, according to at the geometric relation of said particular linked content item to said visual field in the virtual space by comparing said changing display priority of the particular linked content item of the information object with a predetermined threshold for determining whether to generate the piece of intermediate data of the particular linked content item of the information object;

storing, in a memory, the generated piece of intermediate data for rendering a display image; and

causing said particular linked content item of the information object to be displayed from said generated intermediate data, according to the geometric relation between said visual field and said particular linked content item of the information object, to render the display image on

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the display memory region by comparing said changing display priority of said particular linked content item of the information object with a predetermined threshold for determining whether to generate the display image of said particular linked content item of the information object.

26. (CURRENTLY AMENDED) A computing apparatus that displays an information object in a virtual space according to visual field data, where the information object represents one or more linked content items of different types, and where the visual field data defines a visual field in the virtual space, the apparatus comprising:

a computer readable medium to store a plurality of intermediate data generators, each corresponding to a different linked content item type of an information object to generate display intermediate data of the linked content items of different types of the information object, said generated intermediate data comprising at least either of texture data or display form defining data, and to store a plurality of display image generators, each corresponding to the linked different content item types of the information object to generate display images from corresponding generated display intermediate data of the linked content item types of the information object; and

a controller ~~to control~~ controlling the apparatus ~~according to a process~~ to perform operations comprising:

assigning a display priority to each linked content items of the information object,

changing the display priority of a particular linked content item of the information object based upon a geometric relation of the particular linked content item to said visual field in the virtual space, wherein the geometric relation of the particular linked content item to the

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visual field in the virtual space is a relative relation comprising one or more of position, orientation, or scale ratio of the particular linked content item to the visual field in the virtual space,

controlling one of the intermediate data generators corresponding to athe particular linked content item type of the information object to generate display intermediate data to display ~~a representative~~the particular linked content item type of the information object, according to athe geometric relation of the ~~representative~~particular linked content item to said visual field in the virtual ~~space;~~space by comparing said changing display priority of the particular linked content item of the information object with a predetermined threshold for determining whether to generate the display intermediate data of the particular linked content item of the information object, and

~~rendering a display image on a display memory region, based upon the generated intermediate data; and~~

controlling one of the display image generators corresponding to the ~~representative~~particular linked content item type of the information object, to generate a display image of the ~~representative~~particular linked content item type of the information object from the generated display intermediate data of the ~~representative~~particular linked content item type of the information object, according to the geometric relation between the visual field and the ~~representative~~particular linked content item of the information object, to render ~~thea~~ display image on ~~thea~~ display memory region by comparing said changing display priority of said particular linked content item of the information object with a predetermined threshold for

determining whether to generate the display image of said particular linked content item of the information object.

Allowable Subject Matter

Claims 1-7, 9-19, and 21-26 are allowed.

The following is an examiner's statement of reasons for allowance:

The prior art either alone or in combination doesn't teach the limitation of:

means for assigning a display priority to each linked content item of the information object and changing the display priority of the particular linked content item of an information object based upon a geometric relation of the particular linked content item to said visual field in the virtual space, wherein the geometric relation of the particular linked content item to the visual field in the virtual space is a relative relation comprising one or more of position, orientation, or scale ratio of the particular linked content item to the visual field in the virtual space;

first means for causing said plurality of intermediate data generating means to generate the respective pieces of intermediate data for displaying the particular linked content item of the information object displayed in the virtual space, according to the geometric relation of the particular linked content item to said visual field in the virtual space by comparing said changing display priority of the particular linked content item of the information object with a predetermined threshold for determining whether to generate a piece of intermediate data of the particular linked content item of the information object; and

second means for causing said plurality of different display image generating means to

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generate display images of said particular linked content item of the information object from said respective generated pieces of intermediate data, to render the display image on a display memory region, according to the geometric relation between said visual field and said particular linked content item of the information object by comparing said changing display priority of said particular linked content item of the information object with a predetermined threshold for determining whether to generate the display image of said particular linked content item of the information object in combination with the other claimed features.

In addition to claim 15, the examiner interprets the operations of the claim are part of the at least one program cited in the preamble.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh T. Vu whose telephone number is (571) 272-4073. The examiner can normally be reached on Mon-Thur and every other Fri 7:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine L. Kincaid can be reached on (571) 272-4063. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Kristine Kincaid
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

T. Vu